STATE OF UTAH

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF SOLID AND HAZARDOUS WASTE

UTAH SOLID WASTE PLAN UPDATE

March 2002

INTRODUCTION

In the nine years since the solid waste plan was written, the activities at solid waste facilities and emphasis of solid waste management in the State have changed. Regulation of solid waste disposal has been extended to all disposal facilities in the state. The general structure of solid waste management has not changed. As in the past, local governments operate most of the disposal facilities that accept municipal waste. These facilities are permitted through the state solid waste program.

Planning has turned from disposal capacity to addressing the need for waste diversion, recycling and management of the more toxic portion of the waste stream such as household hazardous waste. Composting has become an important part of the mix of solid waste management options for many areas. Household hazardous waste collection programs are operated in several counties.

The following is a summary of the solid waste management activities in Utah and a historical picture of the changes over several years. Information provided in this report has been compiled from the annual reports submitted by solid waste facilities in March of each year for the previous calendar year. These reports are often estimates of the waste received in, as many facilities do not have scales or do not weight all loads entering the facility.

To understand the following information, knowledge of the Utah solid waste program is necessary. Landfills are broken down into classes. These classes are generally, based on the type and volume of waste accepted at the site. The following is a list of the landfill classes and the characteristics of each class.

Class I - A landfill that can accept any type of non-hazardous solid waste and receives an average of more than 20 tons of waste per day. Municipal solid waste is the major type of waste that is received by this type of facility.

Class II - A landfill that can accept any type of non-hazardous and receives an average of 20 tons or less of waste per day. Municipal solid waste is the major type of waste that is received by this type of facility.

Class III - An Industrial landfill that can accept non-hazardous waste generated by an industry. Class III landfills may not receive municipal solid waste. This class is divided into Class IIIa and Class IIIb. Class IIIa landfills can receive conditionally exempt small quantity generator hazardous waste for disposal, but Class IIIb landfills cannot.

Class IV - A landfill for disposal of construction and demolition waste, dead animals, asphalt, yard waste, and Tires. Class IV landfills may not receive municipal solid waste or any other waste not listed above. This class is divided into Class IVa and Class IVb. Class IVa landfills can receive conditionally exempt small quantity generator hazardous waste for disposal, Class IVb landfills cannot

Class V - A landfill that is intended to be operated for a profit. These landfills differ from the other landfill types in that they can receive many different types of waste. Class

I through IV landfills are separated by the type and amount of waste that can be accepted. Class V landfills are distinguished for the other landfill classes by the fact that they are operating for a profit. Therefore, the specific regulations that apply to a Class V landfill are tailored to the type of waste that is received. Some Class V landfills may receive any non-hazardous waste and are required to meet stringent design and monitoring standards. Other Class V landfills accept only a limited waste stream. The design and operation of the landfill is tailored to the waste types disposed at the site.

Class VI – A landfill that is intended to be operated for a profit and receives only construction and demolition waste and yard waste. These landfills have the same requirements as Class IV landfills except the approval process requires the same steps as a Class V landfill.

While landfills in Utah are not generally restricted from receiving wastes from outside of the state, no Class I, II, III or IV landfill has reported receiving significant amounts of out-of-state waste. Similarly, Class V and VI landfills have no restrictions on the origin of the waste received. One Class V landfill in Utah receives both industrial and municipal non-hazardous waste from outside of Utah. This waste has not been counted in the calculation of per person waste generation in Utah.

For purposes of showing waste generation rates for different types of waste in Utah, the waste received at class V and VI landfills, which is generated within the state, has been added to the category of appropriate waste type, i.e., municipal, industrial or C/D. This breakdown is possible for Class V and VI landfills because of the records that must be keep for payment of state fees and the limits on the waste stream received at some sites. A corresponding breakdown for Class I and II landfills is not possible. In viewing the waste generation data, it must be recognized that some non-municipal waste, disposed at Class I and II landfills, is included in the municipal category

WASTE GENERATION

Municipal Waste

The solid waste facility annual reports can be used to provide an estimate of the basic breakdown of the waste stream into municipal waste (generally consisting of residential/commercial solid waste from single-family or multi-family dwellings and commercial facilities and may also include some industrial waste, construction/demolition waste and yard waste in some areas of the state), industrial waste, and construction/demolition and yard waste. It is assumed that all waste disposed at a Class I or II facility is municipal solid waste. The reports reflect the waste disposed at the site and may not reflect some recycling that takes place at landfills.

US Environmental Protection Agency (USEPA), in the *MUNICIPAL SOLID WASTE IN THE UNITED STATES: 2000 FACTS AND FIGURES*, estimates that the average municipal waste generation rate for the United State is 4.5 pounds of waste per person per day.

Municipal waste generated in Utah totaled 2,366,929 tons in 2000 (as reported on March 2001

annual reports). Based on the population of Utah from the 2000 census this equates to a municipal waste generation rate of 5.81 pounds per person per day. Table 1 shows the municipal waste generation rate and per person generation rate by county for the 2000.

Several factors may have had an effect on the municipal waste generation rate in Utah. First, many of the tonnages reported by landfill owners/operators are estimates and may severely over or under state the municipal waste received. Examples of possible overstating of waste received are Iron County, 14.35 lb/person/day, and Summit County, 14.72 lb/person/day. An example of possible understating of waste received is Sanpete County, 2.69 lb/person/day. Second, many landfills take both municipal and construction/demolition waste. The national numbers given by USEPA are for municipal waste only. Consequently the tons of waste reported by Utah landfills that receive municipal waste and construction/demolition waste would be higher than those reported by the USEPA. Third, USEPA numbers exclude waste from industrial sources. In most cases it is not possible to exclude industrial waste from the total waste received at Utah landfills.

Table 1: Utah Waste Statistics for 2000

County	Municipal Waste (Tons)	Percent of Total Municipal Waste	Population	Per Person Generation (lb/person/day)
Beaver	8,071	0.3%	6,005	7.63
Box Elder	39,271	1.6%	42,745	5.03
Cache	80,156	3.3%	91,391	4.81
Carbon	NA[1]		20,422	
Daggett	1,138	0.05%	921	6.77
Davis	298,230[2]	12.3%	238,994	6.64[3]
Duchesne	26,875[4]	1.1%	14,371	4.98[5]
Emery	11,256	0.5%	10,860	5.65
Garfield	8,645[6]	0.3%	4,735	7.68[7]
Grand	11,011	0.5%	8,485	7.11
Iron	88,436	3.6%	33,779	14.35
Juab	12,820	0.5%	8,238	8.53
Kane	4,000	0.2%	6,046	3.63
Millard	15,158	0.6%	12,405	6.7
Morgan	[2]		7,129	[3]
Piute	[6]		1,435	[7]
Rich	3,492	0.1%	1,961	9.67
Salt Lake	1,072,066[8]	44.0%	898,387	6.54

County	Municipal Waste (Tons)	Percent of Total Municipal Waste	Population	Per Person Generation (lb/person/day)
San Juan	10,247	0.4%	14,413	3.9
Sanpete	11,172	0.5%	22,763	2.69
Sevier	31,755	1.3%	18,842	9.23
Summit	79,872	3.2%	29,736	14.72
Tooele	29,355[9]	1.2%	40,735	3.95
Uintah	26,218	1.0%	25,224	5.7
Utah	337,881[8]	13.8%	368,536	5.02
Wasatch	[4]		15,215	[5]
Washington	111,492	4.6%	90,354	6.76
Wayne	4,038	0.2%	2,509	8.82
Weber	161,227[9]	6.6%	196,533	4.5
Total	2,366,929[10]		2,233,169	5.81

[1]Carbon County waste is disposed at the ECDC landfill and is not segregated from waste received from transfer stations in Salt Lake, Utah, Weber, and Tooele counties.
[2]Waste from Davis and Morgan counties is combined at the Wasatch Energy Recovery Facility and Landfill
[3]Per person generation rate is for Davis and Morgan counties
[4]Duchesne and Wasatch counties' waste is disposed at the Duchesne County landfill
[5]Per person generation rate is for Duchesne and Wasatch counties combined
[6]Garfield and Piute counties' waste is disposed at the Garfield County landfill
[7]Per person generation rate is for Garfield and Piute counties combined
[8]Some municipal waste from county goes through a transfer station and is disposed at ECDC landfill
[9]All county municipal waste goes through a transfer station and is disposed at ECDC landfill
[10]Individual county totals do not agree with state disposal total because of differences in reporting of transfer station and disposal tonnages. The total used is from the annual reports of disposal tonnage.

Figure 1 shows the total municipal waste generated in Utah for 1994 through 2000. It is apparent from Figure 1 that municipal waste generation in Utah has fluctuated over the years shown. Several factors may account for this variation. The most important of which may be the variability of the estimates provided by disposal facilities.

The Utah pre person generation rate from 1994 through 2000 is shown in Table 2. As expected Table 2 shows the same fluctuation that is shown in the total municipal waste generated per year. Per person rates are also affected by the population estimate used as well as all of the other factors previously stated. The year 2000 number is the most accurate as it reflects the population from the 2000 censes.

Utah per person municipal waste generation in 2000 is over one pound more than the national average shown in the USEPA *MUNICIPAL SOLID WASTE IN THE UNITED STATES: 2000 FACTS AND FIGURES*. As discussed previously, this difference may be accounted for by the

inability to separate industrial and construction/demolition waste from municipal waste at many landfills and the inaccuracy of estimates of tons of waste received.

Table 2 also shows the municipal waste generation rate for Utah County. This county processes most of the municipal waste through two transfer stations and most of the waste is weighted. The two transfer facilities accept only limited amounts of construction/demolition waste. The facilities do, however, accept industrial waste generated within the county. Only one landfill in the county receives waste directly (not through a transfer station) and accounts for only 4% of the total county waste.

Figure 1 - Municipal Waste Generated in Utah for the Last 5 Years.

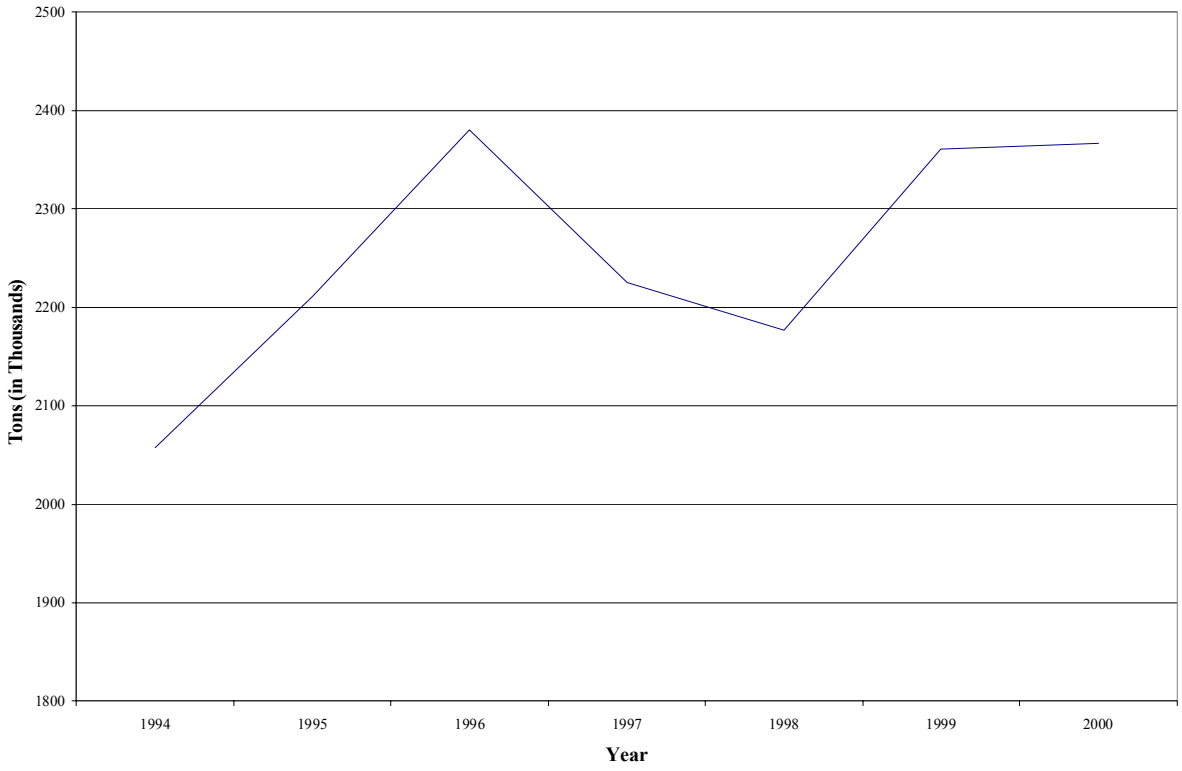

Table 2: Yearly Generation Rate Per Person

Year	1994	1995	1996	1997	1998	1999	2000
Utah Generation in pounds per person per day	5.88	6.19	6.51	5.95	5.73	6.10	5.81
Utah Co. Generation in pounds per person per day	3.69	3.64	4.89	4.83	4.89	4.94	5.02

A comparison of the municipal waste generation numbers for Utah County and the USEPA shows a much closer match. In general, however, the per person generation rate in Utah appears to be slightly higher than the national average.

Industrial Waste

Industrial solid waste results form an industry or commercial process, including businesses associated with manufacturing, mining, construction, transportation, communications, public utilities, and wholesale trade. Unlike municipal waste, industrial waste generation rates can very greatly from county to county and from state to state. Except for disposal data from Class III landfills and two Class V landfills, the solid waste annual reports cannot be used to separate industrial waste form other waste types. The tonnages shown in Table 3 are for Class III landfills and the two Class V landfills that show waste types on their annual reports.

Prior to 1998 the *Solid Waste Permitting and Management Rules* did not require industrial waste landfills that were operated on the site of the industry to have a permit or report waste received.

In the year 2000 the number of landfills that accept only industrial waste was 23. In addition to the Class III landfills receiving industrial waste, one Class V landfill accepts only industrial waste. Another Class V landfill receives large amounts of industrial waste, about one third of the volume of waste received at the landfill. However, a large part of this waste comes from outside of Utah. Tonnages shown include only waste generated inside Utah and disposed at facilities within the state.

Some of the variability in the volume of industrial waste disposed can be accounted for by cleanups of contaminated sites in the state. A site cleanup during 1996 and part of 1997 generated the large increase in yearly volume. 1999 and 2000 yearly volumes reflect, in part, better reporting by industrial landfills.

Table 3: Industrial Waste Disposal

Year	1994	1995	1996	1997	1998	1999	2000
Total Tons	175,128	133,934	823,351	545,571	69,885	411,975	583,426

Construction and Demolition Waste, Yard Waste and Other Class IV Waste

Landfills that are restricted to the disposal of only construction and demolition waste (C/D), yard waste, dead animals, asphalt, and tires are referred to as Class IV landfills. Also, Class VI landfills are commercial disposal sites restricted to this waste stream. In many areas these landfills are referred to as C/D landfills. In Utah these landfills range in size from large sites that may receive over ½ million tons of C/D waste per year to small sites in rural areas that dispose mainly yard waste and receive less than 2000 tons per year. Table 4 shows the amount of waste reported by Class IV landfills and Class VI landfills.

Table 4: Class IV Waste Disposal

Year	1994	1995	1996	1997	1998	1999	2000
Total Tons	745,524	975,265	914,955	1,201,821	473,493	782,375	1,122,744

Most Class IV landfills do not have scales and estimate the waste received in cubic yards. For the summary of the solid waste annual reports, these yardage numbers are taken and converted to tons using an estimate of pounds per cubic yard that vary from 500 lb/yd^3 to 1000 lb/yd^3. Tonnages for landfills that are in rural areas are generally estimated using the 500 lb/yd^3 number while sites that receive large amounts of C/D waste generally are converted using the 1000 lb/yd^3 number.

As much as 80% of the total tons of waste deposed at Class IV and VI landfills come from three sites in the Wasatch Front area. Fluctuations in the waste received at these three landfills reflect the growth rates and construction activities that are taking place in the counties along the Wasatch Front.

Imported and Exported Solid Waste

Import and export of waste occurs in several ways. First, small quantities of waste that are generated in cities and towns along the borders of Utah are taken to the closest landfill. In some cases these wastes are exported to the adjacent state and in some cases the waste is imported into Utah. These waste exchanges with neighbors are small and will likely balance. Another form of waste import is waste coming to Class V landfills for disposal. Table 5 shows the amount of waste imported into Utah for disposal at Class V landfills. The largest amount of waste imported into the state is industrial waste. Some municipal waste is also imported and a small amount of infectious waste is imported and incinerated at the one commercial infectious waste incinerator in the state. No information is available on the amount of waste exported from the state.

Table 5: Solid Waste Imported

Year	1994	1995	1996	1997	1998	1999	2000
Municipal tons	0	2,695	18,245	3,390	11,405	21,174	65,844
Industrial tons	685,772	768,256	624,664	361,726	303,226	526,151	298,616

SOLID WASTE MANAGEMENT FACILITIES

Solid waste management facilities in Utah cover the range of treatment, storage, and disposal facilities. The mix of these facilities shows the changing nature of solid waste management in the state and a differing emphasis. As the population has increased the need for more disposal

volume and the need for alternatives to disposal has become apparent. Siting of new landfills becomes more difficult as population grows and availability of land that is suited for landfill siting is limited by encroaching housing and other land uses. In many of the heavily populated areas of the state the emphasis has shifted to preservation of existing disposal space through recycling and composting programs and transfers of waste to remote landfill sites.

The mix of solid waste disposal options, incineration or landfilling, has not changed over the past several years. The largest change has occurred with the addition of several transfer stations and with an increase in the number of Class IV facilities. Following the implementation of the *Utah Solid Waste Permitting and management Rules*, which are based on the federal subtitle D rules, smaller facilities were closed and more regional facilities were sited. As the hauling distances to the regional facilities increased many communities outside the Wasatch Front found that having a nearby disposal site for construction/demolition waste and yard waste was important for solid waste management.

As discussed in the Introduction, Utah solid waste landfills have been segregated into six types. Class I landfills are facilities that receive more than 20 tons per day of all types of non-hazardous waste. Generally these facilities are publicly owned and the major portion of the waste received is municipal waste. Class II landfills are the same as Class I facilities but may not receive more than 20 tons per day, on a yearly average. Conditionally exempt small quantity generator hazardous waste and hazardous waste that is generated by households is exempt from the hazardous waste regulation and may be disposed at Class I or Class II facilities.

Class III landfills are industrial disposal sites that receive only waste generated by industrial processes and related waste. No municipal waste is allowed at Class III sites. Class III landfills have been subdivided into Class IIIa and IIIb facilities. Class IIIa facilities are industrial sites that can dispose of conditionally exempt small quantity generator hazardous waste. Class IIIb landfills may not dispose of conditionally exempt small quantity generator hazardous waste. No permitted Class IIIa landfills currently exist in Utah

Class IV landfills are limited in the waste that may be received for disposal. These wastes are construction waste, demolition waste, yard waste, asphalt, dead animals, and tires. Again Class IV landfills have been subdivided into Class IVa and Class IVb landfills. Class IVa landfills may dispose of conditionally exempt small quantity generator hazardous waste when it is generated as part of a waste stream that may be accepted at these sites. Class IVb landfills may not dispose of this waste. No permitted Class IVa landfills currently exist in Utah.

Class V landfills differ from the other landfill classes in that they are separated by the type of operation not the type of waste that is disposed. Class V landfills are facilities that are operated for a profit. The type of waste that is received is dependent on the permit and can be all non-hazardous solid waste, industrial waste, construction/demolition waste, or any combination of these.

Class VI landfills are facilities that are operated for a profit. The waste stream that they may receive is limited to the same waste types as the Class IVb landfill. The Class VI designation was created to separate landfills that take only this limited waste stream because they have a different status under the Solid and Hazardous Waste Act than Class V landfills.

Ownership of solid waste facilities in Utah, shown in Table 6, has generally been in the public sector for municipal waste facilities. Some public facilities are operated through a contract with private companies, however, most are publicly owned and operated. Class III landfills are generally owned and operated by the companies that operate the industry. Two of the three publicly owned Class III landfills are owned by a public utility to dispose of waste generated at the utility generating plant.

Table 6 2001 Disposal Facilities Types

Total Permitted Disposal Facilities by Type and Ownership

Facility Type	Total #	# Public	# Private
Class I	18	18	0
Class II	17	17	0
Class III	23	3	20
Class IV	38	32	6
Class V	8	1	7
MSW Incinerators	1	1	0
Other Incinerators	3	1	2
Total	**108**	**73**	**35**

The other publicly owned Class III landfill is owned and operated by a county but designated for the disposal of industrial waste from a contaminated soil cleanup.

The total number of solid waste disposal facilities has decreased from the number active prior to the implementation of the *Utah Solid Waste Permitting and Management Rules* in 1993. The mix of facility types has also changed with an increase in the number of Class IV facilities and a decrease in the number of Class I and II landfills. Table 7 shows the change in facilities through time.

Table 7 Disposal Facility Types

Facility Type	Year						
	1994	1995	1996	1997	1998	1999	2000
Class I	19	20	20	21	18	18	18
Class II	36	31	28	23	16	18	17
Class III	19	17	18	19	19	22	23
Class IV	16	29	32	34	39	37	38
Class V	4	4	5	4	7	7	8
MSW Incinerators	1	1	1	1	1	1	1
Other Incinerators	18	18	18	18	17	6	3
Total	**112**	**120**	**122**	**120**	**117**	**109**	**108**

The change in the number of incinerators is the result of closing of small incinerators operated by many rural hospitals. These incinerators became subject to more stringent air quality rules in 1999 and all were closed rather than meet the requirements of the new rules.

Remaining Municipal Waste Disposal Capacity

Disposal capacity is very hard to measure. It depends on several factors and can be changed by things as simple as changing the daily cover method used at the landfill or by buying a new compactor. Many sites in the state have a disposal capacity of less than 20 years in the current permitted area and with the current waste handling practices. However, many of these sites have adjacent land that is available for purchase or the facility owners have purchased adjacent land but have not currently permitted it for use as a landfill.

Another way to increase the life of a landfill is to divert waste through recycling, composting, or through transfer of waste to other landfills. Sites in urban parts of the state have used most or all of these strategies to extend the life of the current landfill. Extending the life of a landfill through waste diversion can only go so far, however before another site will be required. Within the next 20 years several landfills in Utah may be close to capacity and new sites will be required. Currently several cities, counties, and service districts are looking at future disposal options.

In addition to the potential for expansion at some of the current landfill sites in the state and waste diversion programs, at lease one landfill in the state has the capacity to dispose of all of the waste generated in Utah for the next 100 years. This landfill, ECDC LLC owned and operated by Allied Waste Inc., is a commercial operation in Carbon County.

Municipal Waste Management Facilities

Landfilling in municipally operated landfills continues to be the disposal option that is most used in Utah for municipal solid waste (MSW). In 2000 there were 37 landfills that received MSW for disposal. A municipality operates all but one of these landfills. Utah has many small landfills as indicated by Table 8. However, as Table 9 indicates, small landfills account of a very small percentage of the MSW disposed in Utah.

Table 8 Municipal Waste Landfills by Size

Landfill Size (in tons per day)	Year						
	1994	1995	1996	1997	1998	1999	2000
0-20 (small)	37	28	28	24	16	16	15
21-100 (medium)	9	10	11	13	11	11	11
101+ (large)	10	10	11	9	9	11	11
Total	**56**	**48**	**50**	**46**	**36**	**38**	**37**

As Table 8 indicates, the largest change in the mix of landfills in Utah has been the reduction in the number of facilities that receive 20 tons or less of waste per day. This shows the

consolidation of landfills and the trend toward more regional facilities. Table 8 also shows that even when small landfills are combined they still accept very small amounts of waste. Many of the small landfills in the state receive less than 5 tons per day.

Table 9 2000 Waste Disposal by MSW Landfills

Landfill Size (in tons per day)	**# of MSW Landfills**	**Waste Disposed (in tons)**	**Total Waste Disposed in MSW Landfills**
0-20 (small)	15	26,252	1%
21-100 (medium)	11	177,817	8%
101+ (large)	11	2,162,860	91%
Total	37	2,366,929	**100%**

2000 annual reports show that 2,366,929 tons of municipal solid waste was generated in Utah and disposed at 37 landfills within the state. Table 9 indicates that more than 90% of the waste generated in Utah was disposed at 11 landfills. This is a significant increase in the concentration of waste in large landfills over that reported in the Utah Solid Waste Management Plan, Which used 1992 data.

Incineration of MSW has not changed over several years. One MSW incinerator, operated by Wasatch Energy Systems, has been in operation for several years and has consistently accepted 120,000 to 130,000 tons of waste per year. In 2000 the Wasatch Energy Systems incinerator incinerated 125,000 tons of MSW. This is 5% of the total MSW disposed in Utah

Industrial Waste Management Facilities

Industrial processes and industrial facilities generate industrial waste. Industrial waste disposal facilities are generally located at the industry site. This waste can be very similar to MSW or it may consist of waste generated by specific industrial processes. Utah rules were changed in 1998 to require the permitting of industrial waste facilities that are located on the site of generation. This change resulted in the reporting of tonnages from industrial sites and a more accurate picture of this particular waste stream. The tonnage of industrial waste disposed of in Utah is also affected by the import of this waste to the ECDC LLC landfill. Disposal of waste generated outside of Utah at the ECDC landfill accounted for 33% of the total industrial waste disposed in Utah in 2000. The amount of out-of-state waste deposed at the ECDC facility has varied from a low of approximately 298,000 tons in 2000 to a high of approximately 768,000 tons in 1995. Table 10 shows the industrial waste disposal by year for in state waste, out-of-state waste and the total waste disposed.

Table 10 Industrial Waste Disposal

Waste Source	Year						
	1994[1]	1995[1]	1996[1]	1997[1]	1998[1]	1999	2000
In State	175,128	133,934	823,351	545,571	69,885	411,975	583,426
Out of State	685,772	768,256	624,664	361,727	303,226	526,151	298,616
Total	**860,900**	**902,190**	**1,448,015**	**907,298**	**373,111**	**938,126**	**882,042**

[1]tonnages prior to 1999 do not reflect complete reporting

Construction/demolition Waste, Yard Waste, and Special Waste Management Facilities

Class IV and VI landfills receive a verity of waste that includes construction/demolition waste yard waste dead animals, asphalt, waste tires, and some types of petroleum contaminated soil. The number of Class IV landfills has increased over the past several years. This increase is the result of two factors. First, rural areas that have seen an increase in the haul distances as landfills are regionalized and located in areas less sensitive to environmental and public concerns. As haul distances increase the need to have a nearby disposal option for large volume waste has increased. These wastes do not present the risk to the environment that municipal waste does and the requirements of the solid waste rules for permitting these facilities are less stringent.

The second factor that has lead to the increase the number of Class IV facilities and the number of Class VI facilities is that municipal landfills and transfer station have made an effort to exclude this waste type. Excluding Class IV type waste saves on landfill space. The general increase in construction activity in Utah has also contributed to the increased need for alternative disposal sites for construction and demolition waste.

Class IV type wastes are also disposed at some Class VI sites. Class VI landfills are separated from Class IV landfills by their operational goals (they are operated for a profit) rather than the type of waste received. Tonnages from these two classes of landfills have been combined.

Table 11 Class IV and VI Disposal

Year	1994	1995	1996	1997	1998	1999	2000
Class IV Sites	16	25	31	31	39	37	38
Class IV Tons	59,228	78,765	86,955	206,821	152,893	205,375	177,244
Class VI Sites (Accepting Only Class IV Waste)	3	3	3	3	3	3	4
Class VI Tons	686,296	896,500	828,000	995,000	320,600	577,000	945,500
Total Tons	**745,524**	**975,265**	**914,955**	**1,201,821**	**473,493**	**782,375**	**1,122,744**

Composting Facilities

Composting of yard waste has become a major component of the solid waste management system for many areas of Utah. Some areas have also included sewage sludge in the composting program. Composting of other waste such as food waste has not enjoyed the same acceptance as yard waste and sludge composting. Composting is used to reduce disposal costs and to increase the life of current landfills. Several sewage treatment facilities operate compost sites that are composting sewage sludge. These facilities are regulated by the Division of Waster Quality and are not included in Table 12.

Most compost facilities are operated by municipalities as part of the disposal operations conducted by the municipality. A few private facilities compost waste generated by operations such as yard services and, one facility composts yard waste and food waste.

Table 12 Compost Facilities

Year	1994	1995	1996	1997	1998	1999	2000
Compost Facilities	7	13	14	14	14	15	16
Material Received (tons)	29,000	29,492	13,763	58,654	60,118	87,815	102,209

Recycling Facilities

Recycling in Utah is done by private industry. Public recycling programs consist of curbside collection and drop off centers. Several landfills operate drop off centers that accept ferrous and nonferrous metals, paper, corrugated cardboard, tires, used oil, and carpet padding. Some collection of plastic and glass also takes place. Information on the amount of material recycled in Utah is not available from the private companies that handle the recycled material from public and private recycling activities.

Waste Handling Facilities

Unlike landfill ownership in Utah, waste handling is split about evenly between private and public ownership. Many cities, counties, and service districts operate collection services that handle the residential waste while private companies handle commercial waste pickup. Other cities, counties, and service districts contract all pickup with private companies. The number of private companies collecting waste varies with the population, urban areas have many collection companies, and rural areas have few or only a single company providing collection services.

As landfills have been moved to remote areas or as a method to divert a portion of the waste stream, several areas in the state have opened transfer stations. These transfer stations transfer waste from collection vehicles to large transfer trucks of to railcars. Rail transfer occurs at three transfer stations along the Wasatch Front. Table 13 shows the increase in the number of transfer

stations in recent years. All but one of the transfer stations operating in 2000 receives municipal waste. The single transfer station that did not receive municipal waste receives construction and demolition waste and is operated in Salt Lake County.

Table 13 Transfer Stations

Year	1994	1995	1996	1997	1998	1999	2000
Transfer Stations	NA	4	5	5	7	10	9
Material Received (tons)	NA	234,988	288,121	278,973	538,810	618,964	715,737

Conclusions

This document is not intended to be a comprehensive update of the Utah solid waste plan that was completed in 1994. The Utah solid waste plan was a combination of the plans that were done by each county. This county planning effort has not been repeated and the information that was provided by the county plans is not available. The annual solid waste reports that are completed by disposal facilities each year provide the basic information that was used in this update.

The available annual report information provides a picture of the current state of waste disposal in Utah. That picture shows a solid waste system that is based on landfilling. Incineration of waste has not increased and currently the Division of Solid and Hazardous Waste does not have any permit applications for new solid waste incinerators.

The biggest change in the solid waste system from 1994 to the present is the increase in the efforts of landfill operators to preserve landfill space by use of composting, recycling and transfer of waste to other facilities. As the space in current landfills is reduced the effort to conserve the remaining space will continue.

Another area that is not currently being pursued, but may be in the future, is reduction of waste generation. As indicated by the generation numbers, Utah citizens generate more waste per person than the national average. This waste generation may provide a fertile area for counties and cities to explore for future reductions in waste coming to landfills.